Interactive Forecast Preparation System
Training Team

# IFPS Training Aid

## *Displaying Virtual Weather Elements*

## Introduction:

In IFPS 16, when Show ISC Mode is on, a new sequence of events occurs in the GFE. The ISC weather elements are not loaded into the Grid Manager below the horizontal blue line. In addition, a new set of ISC weather elements called virtual elements are available, but, not immediately displayed in the Grid Manager. This training aid shows you how to view these hidden ISC and virtual weather elements in the GFE.

## Objective:

Demonstrate how to view the hidden ISC and virtual ISC weather elements in GFE.

## Procedure:

1. Select a QPF grid in the Grid Manager containing an amount > .01.

2. Select the spider web icon, Toggle Intersite Coordination Mode.

   Your Spatial Editor should show your CWA plus surrounding ISC grids.

   **Note:** ISC grids are not loaded in the Grid Manager below the blue line like in the past.

   The Show ISC Mode compares your weather element grids against your neighboring office's CWAs. In the past, comparison of rate dependent weather elements, MaxT, MinT and PoP elements between offices was like comparing apples to oranges since the forecast intervals of an event or the definition of MaxT/MinT may not be the same. In IFPS 16, a virtual weather element is calculated for the MaxT, MinT, QPF, SnowAmt and PoP elements and displayed against your Fcst database.

   For example, QPF is a rate-dependent weather element. It doesn't make sense to display your 12-hr QPF Fcst grid against a 1-hr QPF ISC grid, since the time periods are not equal. In this case, using the virtual weather element capability in the GFE, a QPF ISC_V virtual grid weather element for the same 12-hr time interval is calculated from the multiple ISC grids in the database. This grid can now be display against your 12-hr QPF Fcst grid, comparing apples to apples.

   The algorithm used to calculate each of the virtual weather elements is shown in the following table:

| Weather Element | Algorithm |
|---|---|
| QPF | The virtual ISC grid is always the same duration as the Fcst QPF grid. The Virtual ISC grid is the rate-summation of the ISC QPF grid. |
| SnowAmt | The virtual ISC grid is always the same duration as the Fcst SnowAmt grid. The Virtual ISC grid is the rate-summation of the ISC SnowAmt grid. |
| MaxT | The virtual ISC grid is always the same duration as the Fcst MaxT grid. It contains the maximum MaxT value gridpoint by gridpoint from the ISC MaxT grids valid over the same period. Normally there is only 1 MaxT grid, except in cases where the office is in a different time zone or adjacent offices have configured their MaxT time constraints differently. |
| MinT | The virtual ISC grid is always the same duration as the Fcst MinT grid. It contains the minimum MinT value gridpoint by gridpoint from the ISC MinT grids valid over the same period. Normally there is only 1 MinT grid, except in cases where the office is in a different time zone or adjacent offices have configured their MinT time constraints differently. |
| PoP | The virtual ISC grid is always the same duration as the Fcst PoP grid. It contains the maximum PoP value gridpoint by gridpoint from the ISC PoP grids valid over the same period. |

3. From the Main Menu Bar, select WeatherElement and Manage Hidden Weather Elements…

   You should see a list of ISC and ISC virtual weather elements that have already been created, but, not visible.

   **Note:** The Manage Hidden Weather Elements… option is dimmed when not in the Show ISC mode.

4. Select the SFC ISC and SFC ISC_V elements for QPF then select Make Visible.

   These two QPF elements will show in the Grid Manager below the blue line. This is just like in the past, when ISC grids were loaded in the Grid Manager below the blue line

   Make sure you have your legends turned on to show all weather elements in the Spatial Editor.

5. Select the conventional QPF, SFC ISC element in the Grid Manager and step through the grids until you hopefully see some grids showing some QPF outside your CWA.

6. Select several sample points outside your CWA, noting the values as you step through the grids.

7. Toggle on the QPF, SFC ISC_V element in the legend, leaving the ISC grid toggled on also. Note the values of both the ISC and ISC_V at the sample points.

   In most cases, the values will be different. The sample point values in the ISC_V grids are a summation of the hourly ISC grids during the same time interval as your QPF Fcst grids above the blue line in the Grid Manager.

8. Unload these ISC grids below the blue line in the Grid Manager by MB3 in the legend and select Unload for each grid or you can go to WeatherElement in the top main menu bar, select Weather Element Groups and Public or the weather element group you normally display when starting GFE.

**END**